

*✓ Sub B1* (d) a second ground layer formed on a lower surface of said internal layer, said

second ground layer disallowing radiation to pass therethrough.

**Please amend claim 13 to read as follows:**

13. (Amended) A cellular phone including a flexible board, said flexible board comprising:

- (a) an internal layer;
- (b) a line formed in a first area of said internal layer, said line radiating unnecessary radiation;
- (c) a first ground layer formed on an upper surface of said internal layer, said first ground layer disallowing radiation to pass therethrough, and
- (d) a second ground layer formed on a lower surface of said internal layer, said second ground layer disallowing radiation to pass therethrough.

**REMARKS**

Reconsideration of this application in view of the foregoing Amendment and the following Remarks is respectfully requested.

**Objections: Claim 13**

The Examiner has objected to claim 13, line 10, because of an informality: in (d) the preposition "on" appears to be omitted following the term "formed". The Examiner is requiring correction.

In response, the applicant has amended both claim 13, and also claim 1 (line 9), to read "(d) a second ground layer formed on a lower surface of said internal layer, said second ground layer disallowing radiation to pass therethrough."

### **35 U.S.C. § 102(b) Rejections: Claims 1-12**

The Examiner has rejected claims 1-12 under 35 U.S.C. § 102(b) as being anticipated by Hiroshi, JP4313300 A, published November 5, 1992.

The Examiner cites Hiroshi as disclosing the flexible board comprising an internal layer, a line radiating unnecessary radiation, a first ground layer, and a second ground layer as recited by claim 1. The Examiner also cites Hiroshi as disclosing the elements of claims 2-12.

The applicant respectfully submits that Hiroshi does not disclose all of the limitations of claims 1-12. In particular, Hiroshi does not disclose the first and second ground layers 1 and 3 formed on an upper and lower surface of the internal layer 2, respectively, as recited by claims 1 and 7. In Hiroshi, First Page Image, the signal wires 3 and the ground wires 4 are contained within the same adhesive layer 2b. In contrast, claims 1 and 7 recite a first ground layer formed on an upper surface of said internal layer, and a second ground layer formed on a lower surface of said internal layer. Therefore, there are two different ground layers, in contrast to the ground wires in the same layer disclosed by Hiroshi.

Therefore claims 1-12 patentably distinguish over Hiroshi.

### **35 U.S.C. § 103(a) Rejections: Claims 13-18**

The Examiner has rejected claims 13-18 under 35 U.S.C. § 103(a) as being unpatentable over Mitama (U.S. 5,740,527 – filed November 22, 1995 – issued April 14, 1998) in view of Hiroshi.

With respect to claim 13-18, the Examiner cites Mitama as disclosing a cellular phone including a flexible board and states that at the time the invention was made, it would have been obvious to one of ordinary skill in the art that the shielded flexible printed circuit

board described by Hiroshi would be limited to application within a certain type of electrical apparatus. Therefore, the Examiner asserts that it would have been obvious to modify Mitama to include the flexible printed circuit board arrangement as disclosed by Hiroshi to reduce interference in a cellular transceiver.

In response, the applicant notes that claims 13-18 are analogous to claims 1-6, except that claim 13 recites a cellular phone including a flexible board. The limitations of the flexible board in claims 13-18 are identical to claims 1-6.

The applicant respectfully maintains, however, that Mitama does not overcome the deficiencies of Hiroshi as described above with respect to claims 1-12. Therefore, the hypothetical combination of Hiroshi and Mitama would not result in the invention as recited in claims 13-18. Consequently, claims 13-18 patentably distinguish over Mitama in view of Hiroshi.

The foregoing Amendment and Remarks establish the patentable nature of all of the claims in the application, i.e., claims 1-18. No new matter has been added, wherefore, early and favorable reconsideration and issuance of a Notice of Allowance are respectfully requested.

Respectfully submitted,  
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Encl. (Version with Markings to Show Changes Made)

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the Claims:**

**Claim 1 has been amended as follows:**

1. (Amended) A flexible board comprising:
  - (a) an internal layer;
  - (b) a line formed in a first area of said internal layer, said line radiating unnecessary radiation;
  - (c) a first ground layer formed on an upper surface of said internal layer, said first ground layer disallowing radiation to pass therethrough; and
  - (d) a second ground layer formed on a lower surface of said internal layer, said second ground layer disallowing radiation to pass therethrough.

**Claim 13 has been amended as follows:**

13. (Amended) A cellular phone including a flexible board, said flexible board comprising:
  - (a) an internal layer;
  - (b) a line formed in a first area of said internal layer, said line radiating unnecessary radiation;
  - (c) a first ground layer formed on an upper surface of said internal layer, said first ground layer disallowing radiation to pass therethrough; and
  - (d) a second ground layer formed on a lower surface of said internal layer, said second ground layer disallowing radiation to pass therethrough.